

## **Elmers Corner: Another Golden Age of Radio?**

**By Robert AK3Q**

I will be the first to say I regret terribly missing out on the 60s and 70s era of radio, not only for the stories I hear told about the propagation conditions, but also on the ability to build kits and work with some of those now-classic radios. Since boat anchors are still plentiful I can recapture a bit of that time, but of course I did not live through it as an amateur radio operator.

Perhaps I am the eternal optimist when it comes to radio, but in many ways I feel as though we are in another "Golden Age" of Radio in that we have a true multitude of options open to us which allow us to participate at almost any level. By this I mean equipment costs continue to come down while features and capabilities climb. Compare the cost of a good transmitter today (easily within \$500-800 for a new highly capable radio) to what they cost back then, and the difference is amazing. Radios cost as much as some cars back then. And while you can still buy a radio that tops \$10,000 today, there is no need to go anywhere near that price to get 90% of its capability. When looking at the used market, prices are even better (there will always be rip-off artists, so buyer beware!).

A friend of mine, Ron KD8AFH recently purchased an entry-level Yaesu and has found it to be an excellent radio, and his findings agree with all I have heard about these radios. He very well may have found his first and last HF radio for under \$800 current price, as I recall. This radio has features the best of the best could only dream of having back in the 60s or 70s because the technology simply did not exist then. So price ratio to feature set is one reason I say we are in a great time for the radio hobby.

Another reason is because there have been significant strides made in the area of software-defined radios, or SDRs, which only a few short years ago also simply did not exist. While it is true a number of radios have for years incorporated computer chips and programming "behind the scenes," full-blown SDRs are nothing short of amazing even at this early stage, with a lot more progress to come. Again price-points have plummeted over the last two years, and the quality and capability of what is available has skyrocketed.

For \$25 and a decent VHF/UHF antenna the [SDR dongles](#) are an incredible steal in terms of capabilities and free software options. For another \$25-30 you can add HF capability and have a [full-blown all-mode radio receiver](#) that is completely portable and controllable through software on a laptop or tablet. Beyond the capabilities of the USB Dongle, this unit and ones similar

to it have two antenna connectors so that there is no need to swap out antennas when switching between VHF and HF. The unit is also enclosed in a metal box which provides more shielding to the electrical components inside, which in turn provides cleaner signals and stronger reception. I noticed a significant increase in the number of airplanes I have been able to monitor just by having this unit over the dongle stick.

Since the size is about equivalent to a small deck of cards the unit is highly portable and lightweight, which means it is great for travel. Most of us travel with some means of computing, such as a laptop or a tablet, and this will work fine on any Windows machine.

Will this receiver rival a decent shortwave or amateur radio? Not by a long shot. But it does have some advantages over a traditional radio for those times when capability and/or convenience are more important than signal quality.

First there is the coverage which goes somewhere around 100 kHz through 1.7 GHz, yes, *Gigahertz!* That's a whole lot of radio in one package. With software packages freely available on the Web there is the capability to use it for shortwave, amateur, broadcast, utility, aeronautic, military, public service, maritime and AM monitoring just to name a few. Signals can be seen over a waterfall or as with a spectrum analyzer, and audio may be easily captured for later analysis.

Stepping up about \$100 there is another SDR unit which has only recently come on the market which is a giant leap forward in terms of quality, the [SDRPlay](#). It retails for \$149, has much broader bandwidth coverage at a single time, and of course has better filters and ADC capability. The wider bandwidth coverage means you can record whole swaths of a band and then later analyze each signal one by one. On a similar radio I once recorded about 2 hours' worth of the entire AM radio band, and can play each station to listen for IDs and programming. I did this on a particularly quiet night atmospherically, because it is rare at my location.

The same capability could allow one to record whole sections of the HF band to study propagation conditions on a given day, catch short burst transmissions such as are used in military and civilian aeronautical communications, or record an evening's worth of police and fire calls as just a few examples. Try that with a traditional radio - you simply cannot do it, period!

## Software

Software is another area where advances have made contacts with distant stations during poor propagation conditions almost a snap. No longer do we have to rely on CW as the only means of getting through tough reception conditions. Now we can use software designed to hear moon bounce contacts right on our own computers to enhance contacts around the world with literally milliwatts. Various digital modes are being created all the time with more and more capabilities, most of them free to the amateur radio community.

There are software packages for monitoring the airwaves such as Multipsk which rivals the best commercial-grade software for around \$50. With dozens and dozens of modes, features which would take page after page to describe, use with a traditional radio is already amazing. Add to the mix an advanced SDR such as the SDRPlay or the next level-up [Elad FDM-S2](#), and the capabilities are astonishing.

Logging software, online QSL services, automated award pages, satellite programs, APRS, D-Star, Echolink and IRLP, and the ability to talk to people around the world from our HT is an amazing thing. And while we may not have Heathkit around anymore, there are many radio kits which can be built with an unprecedented level of design control. We even have access to 3-D printers now which is going to revolutionize how we interact with the world. Who will build the first 3-D printed radio? It won't be long!

There are far more opportunities to enjoy the hobby than I have time for, and I do not see the hobby slowing down one bit. Has it changed since the 60s and 70s? You bet! Is it better? No, just different. But I am here now, in this place and time, and I will try to enjoy every minute I can! Perhaps 40-50 years from now people will refer to this time as "The Golden Age of Radio!" 73!